

FOREST EXCISE TAX -- ROAD SUMMARY SHEET

Region: Northwest

Timber Sale Name: In the Cloud

Application Number: 76717

Excise Tax Applicable Activities

Construction: 0 linear feet

Road to be constructed (optional and required) but not abandoned

Reconstruction: 264 linear feet

Road to be reconstructed (optional and required) but not abandoned.

Abandonment: 3696 linear feet

Abandonment of existing roads not reconstructed under the contract

Deactivation: 0 linear feet

Road to be made undriveable but not officially abandoned.

Pre-Haul Maintenance: 0 linear feet

Existing road to receive maintenance work (specifically required by the contract) prior to haul

Excise Tax Exempt Activities

Temporary Optional Construction: 0 linear feet

Optional roads to be constructed and then abandoned

Temporary Optional Reconstruction: 0 linear feet

Optional roads to be reconstructed and then abandoned

New Abandonment: 0 linear feet

Abandonment of roads constructed or reconstructed under the contract

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contract. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.

(Revised 7/04)

Department of Natural Resources

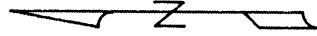
NORTHWEST REGION

ROAD PLAN AND SPECIFICATIONS

#76717 IN THE CLOUD

BAKER DISTRICT DEMING UNIT

57/8-T39N-R6E



THIS PROJECT INCLUDES LANDING CONSTRUCTION AT PURCHASER DESIGNATED LOCATIONS ON THE S-1000 AND S-1200 ROADS.

SHEET INDEX

PROJECT MRP.....	1
ROAD CLAUSES.....	2-7
TYPICAL SECTION.....	8
STANDARD DETAILS.....	9-10
PIT PLAN.....	11-12
MAINTENANCE SPECIFICATIONS.....	13

LEGEND

REQUIRED CONSTRUCTION	-	==	==	==
OPTIONAL CONSTRUCTION	-	-	-	-
REQUIRED RECONSTRUCTION	-	=====	=====	=====
OPTIONAL RECONSTRUCTION	-	=====	=====	=====

DESIGNED BY J. Stewart	REVIEWED BY BD 10-19-04	DATE 08-25-04	SHEET 1 OF 13
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SECTION 0 - SCOPE OF PROJECT

This project includes but is not limited to the following major items:

Development of an existing gravel source at milepost 0.4 of the S-1100 road. Development will involve processing rock to generate gravel ballast. Pit plan on sheet 12. Note timing restrictions in the pit plan due to wildlife issues.

Landing construction at Purchaser designated locations on the S-1000 and S-1200 roads.

Reconstruction of the S-1000 road, totaling 0.05 mile, involving blading, shaping, ditching, and application of gravel ballast rock.

SECTION 1 - GENERAL CLAUSES

- 1.1-1
- Clauses in this plan apply to all landing construction or reconstruction including landings unless otherwise noted.
- 1.1-2
- Reconstruction of the following road is required. This road shall be reconstructed on the State's location and in accordance with this Road Plan.
- | Road | Length | Type |
|--------|-----------|----------------|
| S-1000 | 0.05 Mile | Reconstruction |
- 1.1-4
- If the purchaser desires a road location or design change, a revised road plan shall be submitted to the State for consideration.
- 1.1-5
- On this plan quantities are minimum acceptable values. Additional quantities required by the State because of hidden conditions or purchaser's choice of construction season or techniques shall be at the purchaser's expense.
- 1.2-1
- Landing construction, reconstruction or abandonment of any road shall not be permitted between November 1 and March 31 unless authorized in writing by the contract administrator. If permission is granted to operate between November 1 and March 31, the purchaser may be required to provide a "Closed Season Plan" to include further protection of water, soil, roads, and other forest assets.
- 1.3-1
- Rock hauling on any road shall not be permitted between November 1 and March 31 unless authorized in writing by the contract administrator. If permission is granted to operate between November 1 and March 31, the purchaser may be required to provide a "Closed Season Plan" to include further protection of water, soil, roads, and other forest assets.
- 1.5-1
- Maintenance on roads listed in Contract Clause C-50: Purchaser Road Maintenance and Repair and C-60: Designated Road Maintainer shall be performed in accordance with "Forest Access Road Maintenance Specifications." If permission is granted to operate between November 1 and March 31, the purchaser shall be required to maintain all haul roads including those listed as "designated maintainer roads". If other operators are using, or desire to use these "designated maintainer roads", a joint operating plan shall be developed. All parties shall follow this plan.

1.5-3

Snowplowing shall not be permitted unless authorized, in writing, by the contract administrator.

SECTION 2 - CLEARING

2.1-1

Fell all vegetative material larger than 2 inches DBH or over 10 feet high between the marked right of way boundaries or if not marked in the field, between clearing limits specified on "Typical Section Sheet."

SECTION 3 - GRUBBING

3-1

All stumps shall be removed that fall between grubbing limits shown on the "Typical Section Sheet." Also those stumps with roots undercut by excavation shall be removed.

3-2

Grubbing limits are defined as the entire area between the external limits shown on the "Typical Section Sheet."

SECTION 4 - DEBRIS DISPOSAL AND REMOVAL

4.1-1

Right of way debris is defined as all non-merchantable vegetative material larger than one cubic foot in volume within the clearing limits, excluding stumps between the clearing limits and grubbing limits.

4.1-2

All right of way debris disposal shall be completed prior to the application of rock.

4.2.3-3

Right of way debris shall not be placed against standing timber.

4.2.3-4

Right of way debris shall be scattered outside the clearing limits in natural openings, unless otherwise detailed in this plan.

SECTION 5 - EXCAVATION

5.1-1

Unless controlled by construction stakes or specific design sheets herein, roads shall be constructed in accordance with dimensions shown on the "Typical Section Sheet."

5.1-2

Purchaser shall not bury merchantable material.

5.1-7

Roads shall be reconstructed to the dimensions shown on the "Typical Section Sheet," within the tolerances listed below. Tolerance classes for each road are listed on the "Typical Section Sheet."

Tolerance Class	A	B	C
Road Width (feet)	+1.5	+1.5	+2.0
Subgrade Elevation (feet +/-)	0.5	1.0	2.0
Centerline Alignment (feet lt./rt.)	1.0	1.5	3.0

5.1-8

Excavation slopes shall be constructed no steeper than shown on the following table except as construction staked or designed:

Material Type	Excavation Slope Ratio
Common Earth	1:1
Fractured or loose rock	½:1
Hardpan or solid rock	¼:1

5.1-9

Excavation and embankment slopes shall be constructed to a uniform line and left rough for easier revegetation.

5.1-11

Embankment slopes shall be constructed no steeper than shown on the following table except as construction staked or designed:

Material Type	Embankment Slope Ratio
Common earth and rounded gravel	1½:1
Angular rock	1¼:1
Sandy Soils	2:1

5.1-12

Organic material shall be excluded from embankment.

5.1-21

Waste material shall not be deposited within 30 feet of a culvert installation.

5.1-22

Waste material shall not be deposited within 30 feet of a live stream.

5.3-1

All embankment and waste material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over entire width of the lifts.

5.4-1

Silt-bearing runoff shall not be permitted to go into streams.

5.5-2

Constructed or reconstructed subgrades shall be compacted.

5.5-5

Finished subgrade shall be crowned as shown on "Typical Section Sheet," uniform, firm, rut-free and shaped to ensure surface runoff in an even, unconcentrated manner.

SECTION 7 - ROCK

7.1-1
Rock for landing construction or reconstruction under this contract may be obtained from an existing pit on State land as listed below. Development and use shall be in accordance with a written "Pit Development and Reclamation Plan". Upon completion of pit operations, the pit shall be left in the condition specified in said plan, subject to written approval by the contract administrator. Use of material from any other source must have prior written approval from the contract administrator. If other operators are using, or desire to use this pit, a joint operating plan shall be developed. All parties shall follow this plan.

<u>Pit Location</u>	<u>Remarks</u>
S-1100 Pit SW¼ Sec 1, T39N, R5E	Development of an existing gravel source at milepost 0.4 of the S-1100 road. Development will involve processing rock to generate gravel ballast. Pit plan on sheet 12. Note timing restrictions in the pit plan due to wildlife issues.

7.1-5
Rock for ballast may be obtained from private sources at Purchaser's expense. The quality of any alternate rock must be equal to or greater than the quality of the rock specified in clause 7.1-1. Use of rock from any alternate source is subject to written approval from the contract administrator.

7.2.1.2-2
Rock shall contain no vegetative debris, dirt, or trash.

7.4.2-1
Apply at least the minimum required rock quantity as shown on "Typical Section Sheet."

7.4.2-2
Subgrade shall be approved, in writing, by the contract administrator prior to application of rock.

7.4.2-8
Each lift of rock shall be crowned as shown on "Typical Section Sheet," and shall be uniform, firm, rut-free and shaped to ensure surface runoff in an even, unconcentrated manner.

7.4.3-3
Rock shall be spread, shaped and compacted concurrently with rock hauling operations.

SECTION 9 - ROAD AND LANDING TREATMENT

9.1-1
The following road shall be abandoned by the Purchaser prior to the termination of this contract.

Road	Location	Treatment
S-1200	MP 0.3 to 1.0	Abandoned

9.1-3

"Abandoned" treatment shall consist of:

1. Remove all ditch relief culverts. The resulting slopes shall be 1:1 or flatter. The removed fill material shall be placed and compacted in a location that will not erode into any type 1 through 5 waters or wetlands.
2. Remove all culverts in natural drainages. The resulting slopes shall be 1:1 or flatter. Strive for matching the existing native streambank gradient. The natural streambed width shall be re-established. The removed fill material shall be placed and compacted in a location that will not erode into any type 1 through 5 waters or wetlands.
3. All removed culverts shall be property of the Purchaser and shall be transported off site.
4. Construct non-drivable waterbars at natural drainage points and at a spacing which will produce a vertical drop of no more than 20 feet between waterbars and with a maximum horizontal spacing of 400 feet.
5. Waterbars shall be skewed at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
6. Waterbars shall intercept the ditch and be keyed into the road cut slope and be outsloped to provide positive drainage. Outlets shall be on stable locations.
7. Inslope or outslope the road as appropriate.
8. Remove bridges and other structures.
9. Pull back unstable fill that has potential of failing and entering any type 1 through 5 waters or wetlands. Removed material shall be placed and compacted in a stable location.
10. Remove berms except as designed.
11. Block the road by constructing a triple tank trap so that four wheel highway vehicles cannot pass the point of abandonment. If necessary construct a vehicular turn-around near the point of abandonment.
12. Revegetate all exposed soils resulting from the abandonment work in accordance with "Section 10 - Revegetation".

9.2-1

Purchaser shall reduce or relocate landing debris, in a manner approved, in writing, by the contract administrator, to avoid landing failures and potential debris slides.

9.2-2

Purchaser shall provide for drainage of all landing surfaces as approved, in writing, by the contract administrator.

SECTION 10 – REVEGETATION

10.1-1

Purchaser shall revegetate all exposed soils within the grubbing limits resulting from landing construction, reconstruction or abandonment.

10.1-2
Purchaser shall perform revegetation during the first available opportunity after landing construction, reconstruction or abandonment is completed. Soils shall not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the contract administrator.

10.1-3
Revegetated soils that fail to germinate or are disturbed and re-exposed through any cause shall be revegetated to the point of full coverage.

10.2-1
Revegetation of all exposed soils shall be accomplished by manual dispersal of grass seed and fertilizer unless otherwise detailed in this plan. Other methods of revegetation must be approved in writing by the contract administrator.

10.3-1-1
Seed mix shall meet the following specifications:

Seed Species	% by Weight
Creeping Red Fescue	50
Elf Perennial Rye Grass	25
Highland Colonial Bentgrass	15
White Clover	10

All seed species shall have a minimum 90% germination rate.
Weed seed shall not exceed 0.5% by weight.

10.3-2
Fertilizer shall meet the following specifications:

Chemical Component	% by Weight
Nitrogen	16
Phosphorous	16
Potassium	16
Sulphur	3
Inerts	49

10.3-3
Revegetation application rates shall result in 50 pounds of in place seed mix and 200 pounds of in place fertilizer mix per acre of exposed soil.

10.4-1
Purchaser shall provide a protective cover over the revegetated area if revegetation occurs between July 1 and March 31. The protective cover may consist of, but not be limited to, such items as dispersed straw, jute matting or clear plastic sheets. The protective cover requirement may be waived by the contract administrator in writing if the Purchaser is able to demonstrate a revegetation plan that will result in the establishment of a uniform dense crop of 3 inch tall grass by October 31.

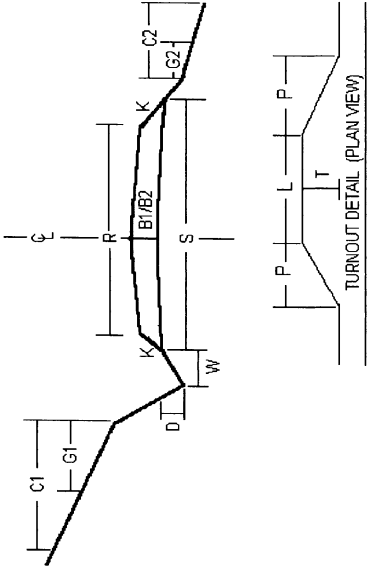
SECTION 11 - SPECIAL NOTES

S-1000 Reconstruction – Cover exposed bedrock at edge of timber sale boundary with gravel ballast. Shape surface to standards shown in “Typical Section” on page 8.

ROAD #	S-1000		S-1000	S-1200
REQUIRED / OPTIONAL	REQUIRED		OPTIONAL	OPTIONAL
CONSTRUCT / RECONSTRUCT	RECONSTRUCT		CONSTRUCTION	CONSTRUCTION
TOLERANCE CLASS (A / B / C)	C		C	C
STATION / MP TO	7.8		7.3	0.0
STATION / MP	7.85		7.85	1.0
ROAD WIDTH	R	12	-	-
CROWN (INCHES @ C/L)	3		-	-
DITCH WIDTH	W	3	-	-
DITCH DEPTH	D	1	-	-
TURNOUT LENGTH	L	-	-	-
TURNOUT WIDTH	T	-	-	-
TURNOUT TAPER	P	-	-	-
GRUBBING	G1	-	-	-
	G2	-	-	-
CLEARING	C1	-	-	-
	C2	-	-	-
ROCK FILL SLOPE	K:1	1 ½	1 ½	1 ½
❖ BALLAST DEPTH	B1	6	-	-
CUBIC YARDS / STATION	37		-	-
➤ TOTAL CY BALLAST	98		100 *	400 *
❖ SURFACING DEPTH	B2		-	-
CUBIC YARDS / STATION	-		-	-
➤ TOTAL CY SURFACING	-		-	-
➤ TOTAL CUBIC YARDS	98		100 *	400 *
SUBGRADE WIDTH	S	13.5	-	-
BRUSHCUT (Y/N)	N		N	N
BLADE, SHAPE, & DITCH (Y/N)	N		N	N

- ❖ Specified Rock Depth is FINISHED COMPACTED DEPTH in inches.
➤ Specified Rock Quantity is LOOSE MEASURE (Truck Cubic Yards) needed to accomplish specified FINISHED COMPACTED DEPTH. Rock quantities include volume for turnouts, curve widening and landings.

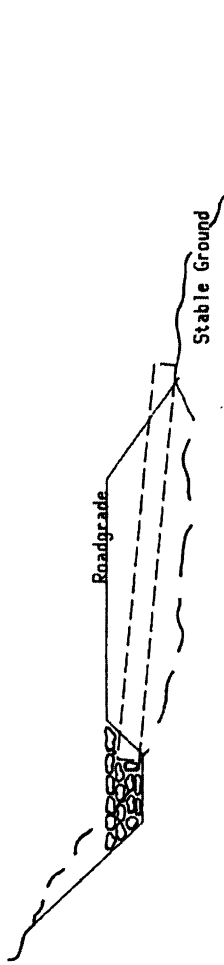
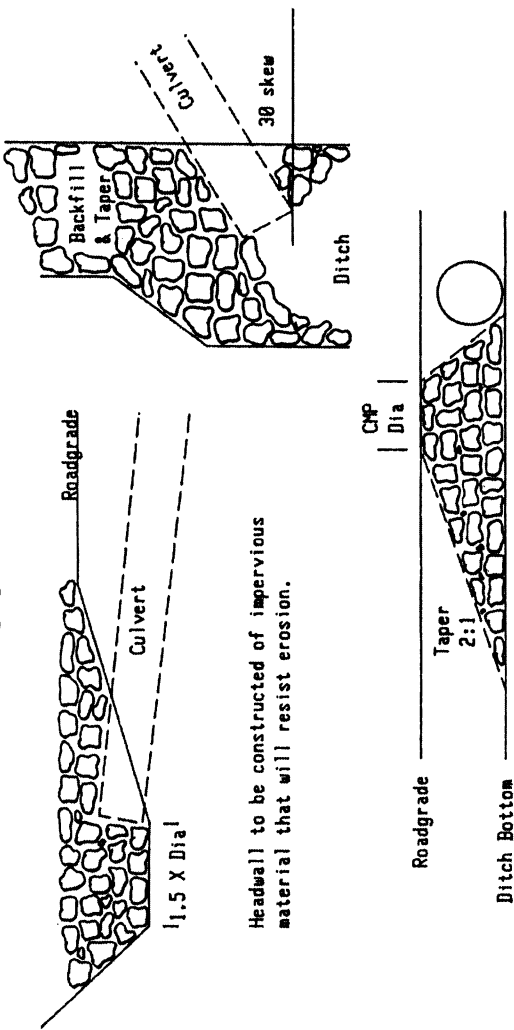
TYPICAL SECTION



* Rock allocation for constructing landings

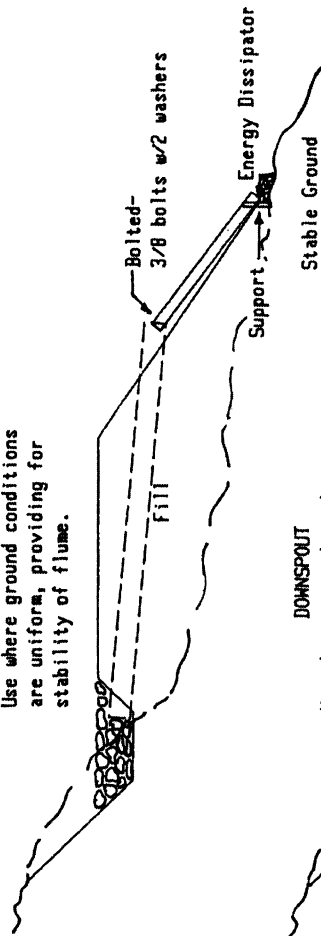
CULVERT AND DRAINAGE SPECIFICATIONS

HEADWALL/CATCHBASIN



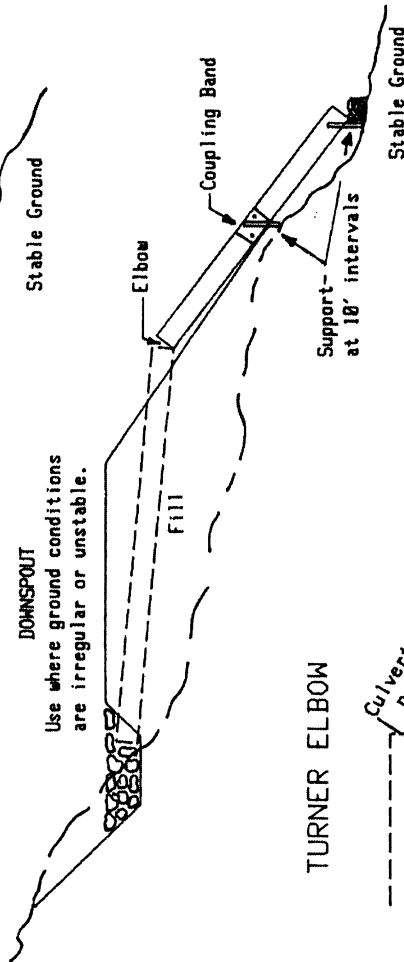
FLUME

Use where ground conditions are uniform, providing for stability of flume.

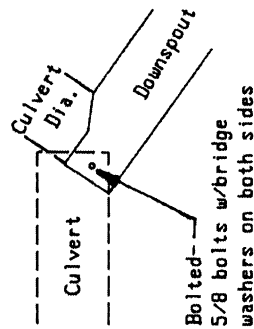


DOWNSPOUT

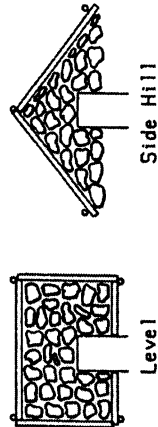
Use where ground conditions are irregular or unstable.



TURNER ELBOW



ENERGY DISSIPATORS



Side Hill

Level



5/97

PIT DEVELOPMENT PLAN

PIT PLAN

S-1100 PIT
SW1/4 51-T39N-R5E

All rock pit operations in the State of Washington are regulated by the Washington State Department of Labor and Industries. The following clauses (WAC 296-155-66005) are taken from the Department of Labor and Industries publication Safety Standards for Construction Work and are hereby made a part of this contract:

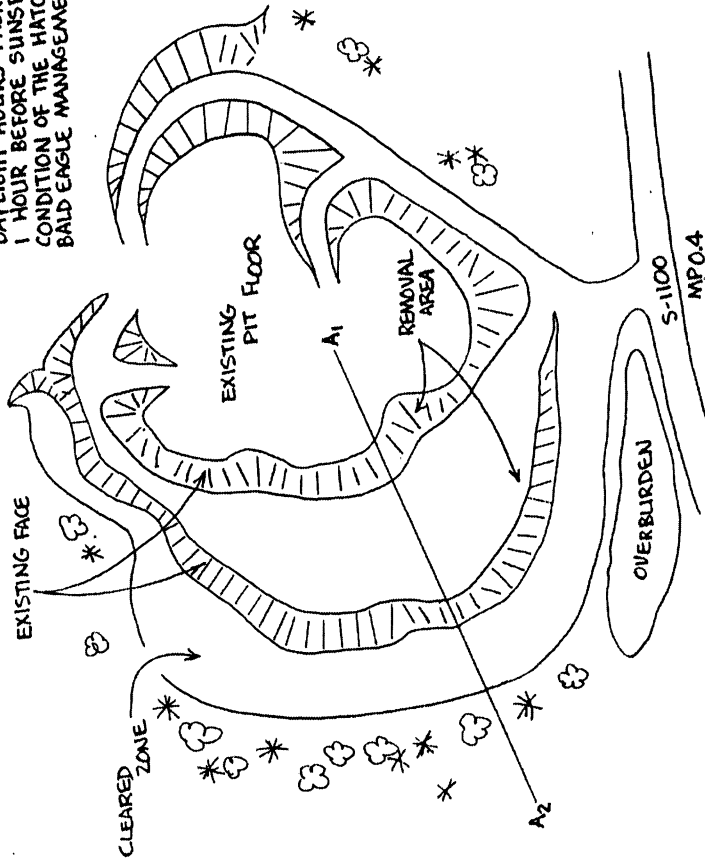
- (1) When excavating equipment is used to remove earthen material from borrow pits:
- (a) The pit walls shall be maintained in a condition to reduce the possibility of the walls sliding or caving in where employees could be exposed to the danger of moving ground.
 - (b) The pit walls shall be maintained at a height no greater than the maximum reach of the excavating machine. (DNR Northwest Region policy specifies a maximum 12 foot high pit wall.)
 - (c) Employees on foot shall not be permitted to be in close proximity to the pit walls.
 - (d) Pit walls shall not be undermined.
 - (e) Wall control.
- (i) The safe control of borrow pit walls, including the overall slope of the walls, shall be consistent with:
- (A) Recognized engineering standards;
 - (B) The nature of the ground and the kind of material being excavated.
- (ii) Excavation methods shall be selected which will ensure wall and bank stability including benching as necessary to obtain a safe overall slope in accordance with the following table:

Borrow Pit Material	Slope Ratio		Slope Angle Vert Degrees
	Horiz:Vert		
Well Rounded Loose Sand	2:1		27°
Compacted Sharp Sand	1 1/2:1		34°
Average Soils	1:1		45°
Compacted Angular Gravel	1 1/2:1		63°
Solid Rock; Compact Shale	--		90°

In addition, the Washington State Department of Natural Resources' Forest Engineering Manual gives further specifications on multi-leveled pit operations:

- (1) Limit the width of working benches to a minimum of 1 1/2 times the maximum length of the largest machine in use.
- (2) Pit floors and benches shall have a uniform surface and be self drained at a minimum of 2% upslope.

ACTIVITIES AT THE PIT BETWEEN DECEMBER 01 AND FEBRUARY 15 MAY OCCUR ONLY DURING DAYLIGHT HOURS FROM 1 HOUR AFTER SUNRISE TO 1 HOUR BEFORE SUNSET. THIS RESTRICTION IS A CONDITION OF THE HATCHERY/BEAR CREEK ROOST BALD EAGLE MANAGEMENT PLAN.



DEPARTMENT OF NATURAL RESOURCES
FOREST ACCESS ROAD

ROAD MAINTENANCE SPECIFICATIONS

I. NEW ROADS (Prior to acceptance of contract or acceptance on timber sale)

A. Cuts and Fills

1. Maintain slope lines as constructed. Remove slides from the ditches and roadway. Replace fills to 1½-1 slopes with selected material or as directed. Remove overhanging material from cut slopes.
2. Material from slides or other sources requiring removal shall not be deposited in streams or at locations where it will erode into streams or water courses.
3. Undesirable slide materials and debris shall not be mixed into the surface material.

B. Surface

1. Grade and shape road surface, turnouts and shoulders to original crown, inslope or outslope as directed to provide suitable traveled surface and surface water runoff in an even, unconcentrated manner.
2. Blading must not undercut backslope at bottom of ditchline.
3. Watering may be required to control dust and to retain fine surface rock.
4. Desirable surface material shall not be bladed off the roadway.
5. Replace surface material lost or worn away.
6. Remove berms except as directed by the State.

C. Drainage

1. Keep ditches and drainage channels at outlets and inlets of culverts clear of obstructions and functioning as intended.
2. Inspect and clean culverts at least monthly, with addition inspection during storms and periods of high runoff. This must be done even during periods of inactivity.
3. Add stable material at outlet end of the culvert as needed to stabilize stream bed.
4. Headwalls - maintain to road shoulder level with material that will resist erosion.
5. Keep silt bearing surface runoff from getting into live streams.

D. Structures

1. Repair bridges, culverts, cattle guards, fences and other road structures to condition required by construction specifications.

E. Termination of Use or End of Season

1. Do maintenance work to minimize damage from the elements such as blading to insure correct runoff, ditch and culvert cleaning, water bars.

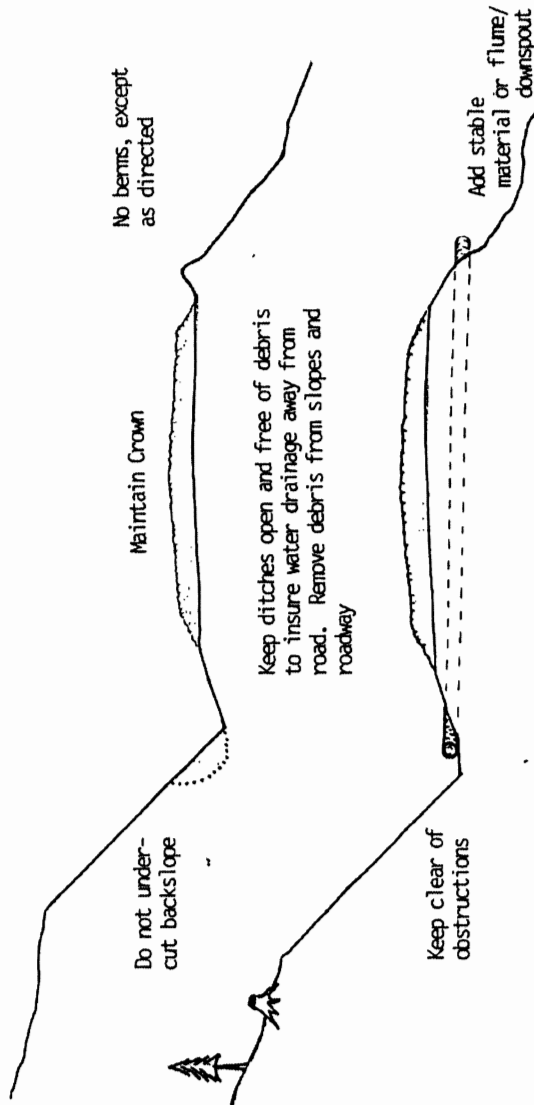
F. Debris

1. Remove fallen timber, limbs, stumps from slopes or roadway.

II. Existing Roads - Timber Sale, Operator Maintained

- A. Same as I above but not to exceed the condition of the road on the date the contract was signed.

III. A.R.R.F. - Direct maintenance to comply with these specifications.



CONTRACT # 76717	PROJECT IN THE CLOUD	SHEET 13 OF 13
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C-60 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on the existing
S-1000 (mp 0.0 to 7.8) and S-1100 roads

plus the S-1000 (mp 7.8 to 7.85) roads reconstructed under this contract after the work is accepted by the State.

Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the State's current equipment rate schedule, on file at the region and olympia offices. The State shall reimburse Purchaser for said costs within 30 days of the receipt and approval of the statement.

C-130 Dust Abatement

Purchaser shall abate the dust on S-1000 (mp 0.0 to 0.1) while hauling.

SEPA AND FPA INFORMATION

Type of Activity	How many	Length (feet) (Estimated)	Acres (Subgrade) (Estimated)	Fish Barrier Removals (#)	Steepest Side Slope Road Crosses	Abandonment Date Month/Year
Construction		0	0		-	
Reconstruction		264		0	40	
Abandonment		3,696	1.4	0	50	Oct 2006
Temporary construction		0	0		-	
Bridge Install/Replace	0					
Culvert Install/Replace (fish)	0					
Culvert Install/Replace (no fish)	0					

Additional FPA questions:

Will you be opening or expanding a rock pit as part of this proposal?

☐ Yes. Indicate size in acres _____.

☒ No.

Is there a DNR assigned Road Maintenance and Abandonment Plan (RMAP) number for the roads within the proposal?

☒ Yes. If yes, list RMAP number R2800010L.

☐ No.

In the Cloud

ROAD COST CALCULATION:

Total road reconstruction costs = \$800